

## Permit with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

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The National Trust

Heat pump system serving  
Plas Newydd  
Llanfairpwll  
Anglesey  
LL61 6DQ

Permit number

EPR/NB3093HC

# Heat pump system serving Plas Newydd

## Permit Number EPR/NB3093HC

### Introductory note

#### **This introductory note does not form a part of the permit**

The main features of the permit are as follows.

The permit regulates the maximum discharge of 999m<sup>3</sup>/day of returned abstracted sea water. The heat pump system serving Plas Newydd extracts sea water from the Menai Strait at a point approximately 48 metres from the high water line on the Ynys Mon shore of the Strait. The water passes through a 10mm filter to prevent fish entering the pipe. The water then travels to a pump house on the shore line where it passes through the pump and a fine filter before the titanium heat exchanger. In the heat exchanger the water temperature decreases by 4.7°C before being returned back to the Menai Strait at a point approximately 5 metres from the intake.

The status log of the permit sets out the permitting history, including any changes to the permit reference number.

<b>Status log of the permit</b>		
<b>Description</b>	<b>Date</b>	<b>Comments</b>
Application EPR/NB3093HC/A001	Duly made 18/07/2014	Application for discharge of returned sea water.
Permit determined	18/11/2014	Permit issued to The National Trust

End of introductory note

# Permit

The Environmental Permitting (England and Wales) Regulations 2010

## Permit number

**EPR/NB3093HC**

The Natural Resources Body for Wales (“Natural Resources Wales”) hereby authorises, under regulation 13 of the Environmental Permitting (England and Wales) Regulations 2010

**The National Trust** (“the operator”),  
whose registered office is

**Heelis  
Kemble Drive  
Swindon  
Wiltshire  
SN2 2NA**

registered charity number 205846

to operate a water discharge activity at

**Plas Newydd  
Llanfairpwll  
Anglesey  
LL61 6DQ**

to the extent authorised by and subject to the conditions of this permit.

Name	Date
<b>Terry Gulliford</b>	<b>18/11/2014</b>

Authorised on behalf of Natural Resources Wales

# Conditions

## 1 Management

### 1.1 General management

- 1.1.1 The operator shall manage and operate the activities:
- (a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances and those drawn to the attention of the operator as a result of complaints; and
  - (b) using sufficient competent persons and resources.
- 1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.
- 1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

## 2 Operations

### 2.1 Permitted activities

- 2.1.1 The operator is only authorised to carry out the activities specified in schedule 1 table S1.1 (the “activities”).

### 2.2 The site

- 2.2.1 The activities shall not extend beyond the site, being the land shown edged in green and the discharge shall be made at the point marked on the site plan at schedule 7 to this permit and as listed in table S3.2 (discharge points).

### 2.3 Operating techniques

- 2.3.1 (a) The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by Natural Resources Wales.

- (b) If notified by Natural Resources Wales that the activities are giving rise to pollution, the operator shall submit to Natural Resources Wales for approval within the period specified, a revision of any plan or other documentation ("plan") specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.

## **3 Emissions and monitoring**

### **3.1 Emissions to water**

- 3.1.1 There shall be no point source emissions to water except from the sources and emission points listed in schedule 3.
- 3.1.2 The limits given in schedule 3 shall not be exceeded.
- 3.1.3 Samples of the incoming and discharge water shall be taken on each sampling occasion. The difference between the discharge and incoming measurements will be calculated for each sampling occasion.

### **3.2 Emissions of substances not controlled by emission limits**

- 3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.2.2 The operator shall:
  - (a) if notified by Natural Resources Wales that the activities are giving rise to pollution, submit to Natural Resources Wales for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;
  - (b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by Natural Resources Wales.

### **3.3 Monitoring**

- 3.3.1 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1, S3.2 and S3.3 unless otherwise agreed in writing by Natural Resources Wales.

## **4 Information**

### **4.1 Records**

- 4.1.1 All records required to be made by this permit shall:
- (a) be legible;
  - (b) be made as soon as reasonably practicable;
  - (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and
  - (d) be retained, unless otherwise agreed in writing by Natural Resources Wales, for at least 6 years from the date when the records were made.
- 4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by Natural Resources Wales.

### **4.2 Reporting**

- 4.2.1 The operator shall send all reports and notifications required by the permit to Natural Resources Wales using the contact details supplied in writing by Natural Resources Wales.

### **4.3 Notifications**

- 4.3.1 Natural Resources Wales shall be notified without delay following the detection of:
- (a) any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution;
  - (b) the breach of a limit specified in the permit; or
  - (c) any significant adverse environmental effects.
- 4.3.2 Any information provided under condition 4.3.1 shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.
- 4.3.3 Where Natural Resources Wales has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform Natural Resources Wales when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to Natural Resources Wales at least 14 days before the date the monitoring is to be undertaken.
- 4.3.4 Natural Resources Wales shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:
- Where the operator is a registered company:
- (a) any change in the operator's trading name, registered name or registered office address; and

- (b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

Where the operator is a corporate body other than a registered company:

- (a) any change in the operator's name or address; and
- (b) any steps taken with a view to the dissolution of the operator.

4.3.5 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:

- (a) Natural Resources Wales shall be notified at least 14 days before making the change; and
- (b) the notification shall contain a description of the proposed change in operation.

## **4.4 Interpretation**

4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.

4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made "without delay", in which case it may be provided by telephone.

# Schedule 1 - Operations

**Table S1.1 Activities**

Description of activity	Limits of specified activity
Discharge of returned abstracted sea water from a heat pump system via Outlet 1	The discharge shall be returned to the same body of water from which it was abstracted.

**Table S1.2 Operating techniques**

Description of documentation	Date Received
Plas Newydd – Marine Source Heat Pump Installation	18/11/2014

## **Schedule 2 - Waste types, raw materials and fuels**

Wastes are not accepted as part of the permitted activities and there are no restrictions on raw materials or fuels under this schedule.

## Schedule 3 – Emissions and monitoring

**Table S3.1 Point Source emissions to water (other than sewer) – emission limits and monitoring requirements**

Discharge source and discharge point ref. & location	Parameter	Limit (including unit)	Reference Period	Limit of effective range	Monitoring frequency	Compliance Statistic
Discharge of returned abstracted sea water from a heat pump system via Outlet 1	Maximum daily discharge volume	999 m <sup>3</sup> /day	Total daily volume	N/A	N/A	Maximum
	Maximum rate of discharge	11.57 litres per second	Instantaneous (spot sample)	N/A	N/A	Maximum
	Temperature ° C	5 ° C	Instantaneous (spot sample)	N/A	N/A	Maximum decrease compared to inlet sample (Condition 3.1.3 applies)

**Table S3.2 Discharge points**

Effluent Name	Discharge Point	Discharge point NGR	Receiving water
Discharge of returned abstracted sea water from a heat pump system via Outlet 1	Outlet 1	SH 52220 69729	Menai Strait

**Table S3.3 Monitoring points**

Effluents and discharge points	Monitoring type	Monitoring point NGR	Monitoring point reference
Discharge of returned abstracted sea water from a heat pump system via Outlet 1	Inlet sample point	SH 52169 69759	Inlet sample point
Discharge of returned abstracted sea water from a heat pump system via Outlet 1	Effluent sample point	SH 52169 69759	Effluent sample point

## **Schedule 4 – Reporting**

There is no reporting under this schedule.

# Schedule 5 - Notification

These pages outline the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the EP Regulations.

## Part A

Permit Number	
Name of operator	
Location of Facility	
Time and date of the detection	

### **(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution**

#### **To be notified within 24 hours of detection**

Date and time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

### **(b) Notification requirements for the breach of a limit**

#### **To be notified within 24 hours of detection unless otherwise specified below**

Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

Time periods for notification following detection of a breach of a limit	
Parameter	Notification period

(c) Notification requirements for the detection of any significant adverse environmental effect	
To be notified within 24 hours of detection	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

## Part B - to be submitted as soon as practicable

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	
The dates of any unauthorised emissions from the facility in the preceding 24 months.	

<b>Name*</b>	
<b>Post</b>	
<b>Signature</b>	
<b>Date</b>	

\* authorised to sign on behalf of the operator

## Schedule 6 - Interpretation

“accident” means an accident that may result in pollution.

“annually” means once every year.

“application” means the application for this permit, together with any additional information supplied by the operator as part of the application and any response to a notice served under Schedule 5 to the EP Regulations.

“emissions to land” includes emissions to groundwater.

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations SI 2010 No.675 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

“emissions of substances not controlled by emission limits” means emissions of substances to air, water or land from the activities, either from the emission points specified in schedule 3 or from other localised or diffuse sources, which are not controlled by an emission or background concentration limit.

“groundwater” means all water, which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

“Natural Resources Wales” means the Natural Resources Body for Wales established by article 3 of the Natural Resources Body for Wales (Establishment) Order 2012. The Natural Resources Body for Wales (Functions) Order 2013 transferred the relevant functions of the Countryside Council for Wales, and functions of the Environment Agency and the Forestry Commission in Wales to the Natural Resources Body for Wales.

“quarter” means a calendar year quarter commencing on 1 January, 1 April, 1 July or 1 October.

“year” means calendar year ending 31 December.

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Stables Block

Stables Plant room meters A,B,C

Pre-insulated Heat main

House Plant room meter D

Plas Newydd House

Track

Path

Path (um)

Path

Slating masonry

Jerly

Water Low Water

Route for Brine Pipes

Proposed location of pump house

Discharge point

Outlet 1

Survey area centred on  
 SH 52215 69723  
 53.20396702N,  
 4.21415998600423W

**Inlet Sample Point / Effluent Sample Point**

IF IN DOUBT ASK! A1 / MEW/ARCHA1

1	Rob Gwllm	3/05/14	RC
2	Corrected	4/05/14	RC

**redcoltec**

efficiency in renewable energy

Future Business Centre  
 King's Hedges Road  
 Cambridge  
 CB4 2HY Tel: 01223 967360  
 M07654 722229  
 rob@redcoltec.co.uk

SCALE DO NOT SCALE

PROJECT Plas Newydd

DESCRIPTION SITE-OUTLAY

DWGNO-1

SHEETS 1-OF-2

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